

Active Recombinant Human ACE Protein, His-tagged

Cat. No. ACE-033H Lot. No. (See product label)

SPECIFICATION

Product Overview

Recombinant human ACE/CD143, fused to His-tag at Cterminus, was expressed in insect cell and purified by using conventional chromatography techniques.

Species

Human

Source

Insect cells

Description

This gene encodes an enzyme involved in blood pressure regulation and electrolyte balance. It catalyzes the conversion of angiotensin I into a physiologically active peptide angiotensin II. Angiotensin II is a potent vasopressor and aldosterone-stimulating peptide that controls blood pressure and fluid-electrolyte balance. This angiotensin converting enzyme (ACE) also inactivates the vasodilator protein, bradykinin. Accordingly, the encoded enzyme increases blood pressure and is a drug target of ACE inhibitors, which are often prescribed to reduce blood pressure. This enzyme additionally plays a role in fertility through its ability to cleave and release GPI-anchored membrane proteins in spermatozoa. Many studies have associated the presence or absence of a 287 bp Alu repeat element in this gene with the levels of circulating enzyme. This polymorphism, as well as mutations in this gene, have been implicated in a wide variety of diseases including cardiovascular pathophysiologies, psoriasis, renal disease, stroke, and Alzheimer's disease. Regulation of the homologous ACE2 gene may be involved in progression of disease caused by several human coronaviruses, including SARS-CoV and SARS-CoV-2. Alternative splicing results in multiple transcript variants encoding both somatic (sACE) and male-specific testicular (tACE) isoforms.

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Form	Liquid
Bio-activity	Specific activity is > 1,000 pmol/min/mg, and is defined as the amount of enzyme that cleaves 1 pmol of Mca-RPPGFSAFK(Dnp)-OH per minute at 25 centigrade.
Molecular Mass	142kDa
AA Sequence	LDPGLQPGNFSADEAGAQLFAQSYNSSAEQVLFQSVAAASWAHDTNITAENARRQE EAALLSQEFAEAWGQKAKELYEPIWQNFTDPQLRRIIGAVRTLGSANLPLAKRQQYN ALLSNMSRIYSTAKVCLPNKTATCWSLDPDLTNILASSRSYAMLLFAWEGWHNAAGI PLKPLYEDFTALSNEAYKQDGFTDTGAYWRSWYNSPTFEDDLEHLYQQLEPLYLNL HAFVRRALHRRYGDYINLRGPIPAHLLGDMWAQSWENIYDMVVPFPDKPNLDVTS TMLQQGWNATHMFRVAEEFFTSLELSPMPPEFWEGSMLEKPADGREVVCHASAW DFYNRKDFRIKQCTRVTMDQLSTVHHEMGHIQYYLQYKDLPVSLRRGANPGFHEAI GDVLALS SVSTPEHLHKIGLLDRVTNDTESDIN YLLKMALEKIAFLPFGYLVDQWRWGV FSGRTPPSRYNFDWWYLRTKYQGICPPVTRNETHFDAGAKFHVPNVTPYIRYFVSF VLQFQFHEALCKEAGYEGPLHQCDIYRSTKAGAKLRKVLQAGSSRPWQEV LKDMV GLDALDAQPLLKYFQPVTQWLQEQNQNGEVLGWPEYQWHPPLPDNYPEGIDLVT DEAEASKFVEEYDRTSQVWVNEYAEANWNYNTNITTETSKILLQKNMQIANHTLKYG TQARKFDVNQLQNTTIKRIKKVQDLERAALPAQELEEYNKILLDMETTYSVATVCHP NGSCLQLEPDLTNVMATSRKYEDLLWAWEGWRDKAGRAILQFYPKYVELINQAARL NGYVDAGDSWRSMYETPSLEQDLERLFQELQPLYLNLHAYVRRALHRHYGAQHINL EGPIPAHLLGNMWAQTWSNIYDLVVPFSPSMDTTEAMLKQGWTPRRMFKEADD FFTSLGLLPVPPEFWNKSMLKPTDGREVVCHASAWDFYNGKDFRIKQCTTVNLED LVVAHHEMGHIQYFMQYKDLPVALREGANPGFHEAIGDVLALS SVSTPKHLHSLNLLS SEGGSD EHDINFLMKMALDKIAFIPFSYLVDQWRWRVFDGSITKENYNQEWWSLRL KYQGLCPPVPRTQGDFDPGAKFHIPSSVPYIRYFVSFIIQFQFHEALCQAAGHTGPLH KCDIYQSKEAGQRLATAMKLGFSRPWPEAMQLITGQPNMSASAMLSYFKPLLDWLR TENELHGEKLGWPQYNWTPNSARSEGPLPDSGRVSFLGLDLDAQQAR

Endotoxin	< 1 EU/μg of protein (determined by LAL method)
Purity	> 90% by SDS-PAGE
Applications	SDS-PAGE, Enzyme Activity
Storage	Can be stored at +2 to +8 centigrade for 1 week. For long term storage, aliquot and store at -20 to -112 centigrade. Avoid repeated freezing and thawing cycles.
Concentration	0.25 mg/mL (determined by Absorbance at 280nm)
Storage Buffer	Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

GENE INFORMATION

Gene Name	ACE angiotensin I converting enzyme [Homo sapiens (human)]
Official Symbol	ACE
Synonyms	ACE; angiotensin I converting enzyme; DCP; ACE1; DCP1; CD143; angiotensin-converting enzyme; CD143 antigen; angiotensin I converting enzyme (peptidyl-dipeptidase A) 1; carboxycathepsin; dipeptidyl carboxypeptidase 1; dipeptidyl carboxypeptidase I; kininase II; peptidase P; EC 3.4.15.1
Gene ID	1636
mRNA Refseq	NM_000789
Protein Refseq	NP_000780
MIM	106180

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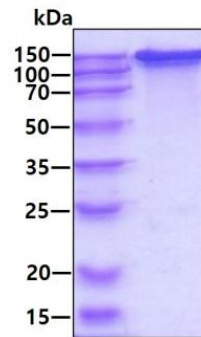
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UniProt ID

P12821

SDS-PAGE



3 µg by SDS-PAGE under reducing condition and visualized by coomassie blue stain

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